

Hinders for Eco-friendly Media Selection

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ABSTRACT

This study shows that, despite organizations claiming to care for the green environment through documented environmental policies, marketing communication such as advertising media selection does not seem to be much guided by green environmental concerns. Problems with consistency and control thus seem to exist between companies' ideas/decisions (documented environmental policies) and their actions (advertising media selection), causing the need for justification and/or hypocrisy.

This study adds to prior research on the non-use of models in practice by showing that the non-use of models also exists among marketing managers when selecting advertising media for marketing communication purposes. It was found that 64 percent of the marketing managers do not make use of media selection models. In the attempt to investigate differences in the factors guiding media selection between marketing managers who use media selection models (users) and those who do not use any model (non-users), it was found that the users take a medium's eco-friendly characteristics less into consideration than the non-users.

The paper discusses that the use of models can be viewed as attempts for making more rational decisions. The findings thus suggest that rational decision-making (users) may hinder eco-friendly media selection while non-rationality (non-users) may develop more powerful organizational ideologies such as acting responsibly towards the green environment. However, this study points out a link between the use of media selection models, previous experience and rules of thumb, i.e. the users tend to make more use of previous experience and rules of thumb than the non-users. Thus, the author argues that a new approach to model use may be needed and that the media selection should not be too much influenced by the marketing managers' previous experience and rules of thumb. Otherwise, new factors may be overlooked such as consumers' increasing concern for the green environment in relation to consumer advertising media attitudes.

Previous studies have found that current approaches to marketing planning pay too little attention to the impact of technological advances on changes in consumer media habits. Thereby the risk may exist for focusing on mainly conventional media and not selecting "new media". The present study seems to contradict these previous findings by showing that the selection of "new media" such as media using the Internet was found among the most selected advertising media by both the users and non-users for the two communication objectives studied, i.e. brand-building and to increase sales. Thus, the results indicate that while the marketing managers adapt their media selection to changes in technological media advances they tend to overlook consumers' increasing concern for the green environment and the environmental aspect of advertising media.

The results also show differences among the marketing managers in their selection of advertising media. At the same time as the non-users tend to be more precise with the recycling of paper, they are more inclined to select paper-based media such as catalogues and brochures than the users. The users on the other hand, tend to select more electronic media such as TV, radio and cinema than the non-users. In the attempt to explain the factors guiding media selection and in particular to what extent the environmental aspect of advertising media is considered, green environmental responsibility attitudes (GERA) of the users and non-users are assessed.

Keywords: Media Selection, Advertising, Green Environment, Marketing Managers, Models, Green Environmental Responsibility (GERA), Rationality, Non-rationality

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1. INTRODUCTION

Studies have shown that the estimated costs of use, loss and damage to the natural environment by human activity could be comparable to one third of the combined profits of the world's three thousand largest companies¹. Medium to large sized companies are estimated to be responsible for one third (35 percent) of annual global externalities (Trucost, 2010). According to the United Nations Environment Programme (UNEP, 2007), personnel responsible for sales and marketing have the responsibility to share information about the impact of products on the environment and society (Simula et al., 2009).

In a literature review no scientific research was found that investigates the green environmental aspect in relation to advertising media selection among marketing managers. In a few surveys among consumers some questions related to the topic were found. For example, in a survey by Yougov (2009) it was found that about 25 percent of Swedish households prefer not to receive direct marketing in paper form through their mail boxes. The main reason given by the respondents was increased environmental concerns.

Another similar example that has received much attention from the press is the findings of a survey showing that 39 percent of Copenhagen's households have a sign on their doors stating "Advertising, no thank you". This has led to an environmental movement urging the remaining 61 percent of Copenhagen's households to stop consuming direct marketing in paper form and instead find ads using the Internet, for the sake of preserving the green environment (Andersson, 2011). These findings can be seen as an indication that the green environmental aspect affects consumer media usage and that paper-based media tend to be regarded by consumers as media that is not eco-friendly.

¹ Annual environmental costs of USD 2.15 trillion in 2008 attributable to the largest three thousand public companies (Trucost, 2010, p. 6).

Eco-friendly consumption is defined as “consumption activities that have a less negative or more positive effect on the natural environment than substitutable activities” (Pieters, 1991). Based on this, eco-friendly media can be defined as: *media that have a less negative or more positive effect on the natural environment than substitutable media*. Pieters (ibid) means that consumers can choose to behave more environmentally responsible when using, acquiring and disposing products. For the marketer it is thus crucial to obtain knowledge on such consumption trends and patterns.

Given this, organizations claiming to commit to caring for the natural environment and the well being of our planet ought to employ environmentally conscious and responsible marketing that stretches beyond merely a consideration of what impact a company’s production and products have on the environment. A logical consequence of companies claiming to care for the environment, as they do through for instance environmental policies, should also mean considering the choice of advertising media, that carries companies’ messages, and its’ impact on the green environment.

When reviewing the literature on the decision premises for media selection, no previous empirical studies were found that include the green environment as a factor guiding decisions in media selection. Recognizing this gap in the literature, an exploratory pre-study (Rademaker, 2011a) based on interviews was conducted exploring the factors that guide marketing managers’ decisions in marketing communication. Of particular interest was to explore if the green environmental aspect was at all considered by marketing managers when they select advertising media. The findings indicated that the green environmental aspect does not seem to be much considered by the marketing managers in their work with media selection. It was also found that media selection is not much guided by media selection models, instead mostly by the marketing managers’ previous experience and rules of thumb. Furthermore, while the interviewed marketing

managers claim to work for companies with documented environmental policies, some seem to regard environmental concerns as something that is taken care of elsewhere in the organization and some see it merely as a trend that comes and goes.

Given the increasing importance of environmentally responsible behavior of consumers which also seem to affect advertising media usage on one hand, as well as the findings of the pre-study (Rademaker, 2011a) indicating that media selection models do not seem to be much used and that the green environmental aspect in marketing communication seems to a great extent ignored by marketing managers on the other, this study investigates to what extent Swedish marketing managers using models and those not using any model for media selection differ on factors guiding media selection and how the possible differences found may impact (eco-friendly) media selection. This study also investigates whether documented environmental policies affect (eco-friendly) media selection. Furthermore, the ambition is to discuss possible explanations behind the findings of this study from the organization literature.

1.1 Frequently used Abbreviations

The following abbreviations are used throughout the paper:

Users	Marketing managers claiming to use media selection models
Non-users	Marketing managers claiming not to use media selection models
GERA	Green environmentally responsible attitude
n.r.	Non response
n.s.	Non significant
M	Mean
SD	Standard Deviation
p	Probability value ²
t	t-value
df	Degrees of freedom
η^2	Eta squared ³

² p-value based on two-tailed t-tests.

³ The values of the effect size are interpreted as proposed by Cohen 1988, pp. 284-7.

2. THEORETICAL FRAMEWORK

In this chapter the main theories used are discussed leading to the posed research questions. In addition, theories from the organization literature are discussed in connection to the findings of the pre-study (Rademaker, 2011a) at the same time as it will set the ground for the analysis of the findings of the present study. The chapter ends with a summary of the research questions posed.

2.1 The Use and Non-use of Models for Media Selection

Marketing managers and other practitioners are the ultimate intended users of theories and models that have come forth from scientific research in marketing. Scientific knowledge seeks to give explanation, prediction and comprehension of phenomena. The purpose of marketing theory and models is thus to advance marketing knowledge by helping practitioners in understanding core issues and guiding key decisions in practice (Hanssens et al., 2005; Otteson and Gronhaug, 2004).

Evidence suggests, however, that the actual use of academic theory by intended user groups is limited (e.g. Ankers and Brennan, 2002; Caplan et al., 1975; Gabriel et al., 2006; Gronhaug and Haukedal, 1997; Hambrick, 1994; Knorr, 1977; Lee et al., 1987). When further reviewing the literature on media selection among practitioners, it can be found that there is increasing concern about the accuracy and usefulness of media selection models and that there is a need for change in the methods of media planning and effective execution (Leckenby and Kim, 1993; Jenkinson, 2006).

No previous study conducted among *marketing managers* and the use/non-use of models for media selection in particular was found. However, prior studies on the use/non-use of models among *advertising agencies* were found. For example, a study on the non-use of models in practice by Gabriel, Kottasz and Bennett (2006) investigated the extent to which advertising

models are used in practice among advertising agencies. They found that there is substantial lack of knowledge of formal models and more than one third of the sample avoided models altogether. The non-adoption of formal models was explained by limited knowledge dissemination and resources such as time pressures, and the lack of employees with the necessary knowledge. Cohen and Levinthal (1990) found additional reasons for not using models in practice such as that potential users find the knowledge of no use or do usually not understand the research information (Cohen and Levinthal, *ibid*).

Based on the discussion above, the findings of the pre-study (Rademaker, 2011a) indicating that media selection models are not particularly used and the fact that no previous empirical study among marketing managers was found on factors guiding media selection that include the use/non-use of models, the first research question is posed:

RQ1: To what extent do marketing managers use models for media selection?

2.2 Complexity and Knowledge of Media Selection

Decisions in media selection are often a great concern for marketing managers since the largest portion of the marketing communication budget is spent on buying media. One of the classic concerns and challenges of marketing managers is to make sure that the media budget is spent effectively and not distributed toward the wrong audience (Iyer et al., 2005).

Recalling that the purpose of tools such as models is to help practitioners in understanding core issues and guiding key decisions in practice (Hanssens et al., 2005; Otteson and Gronhaug, 2004), a reasonable consequence should be that those using media selection models perceive the task of media selection less complex than those who do not use any media selection model. However, decisions in media planning and consequently the media selection are becoming increasingly complex and challenging as more media options are available (Percy and Elliot,

2005, p. 164; Turk and Katz, 1992). Besides the economic importance of these decisions whereby advertising investments are at stake, the rapid technological development in for example the digital media environment has lead to increasing ways in which companies can communicate with consumers (Crosier et al., 2003). Furthermore, marketing managers are also confronted with a highly competitive communication environment increasing the message competition in marketing communication (Rosengren, 2008).

Media selection is even more challenging by the fact that each medium has its advantages and disadvantages, not only in terms of how many persons of the target audience are expected to be exposed to the advertiser's message during a given time period (reach), how often each person of the target audience, on average, is expected to be exposed to the advertiser's message during a given time period (frequency), its impact and costs, but also in terms of suitability to take the consumer through the different stages of the communication process (Coulter and Sarkis, 2005).

The second research question is:

RQ2: To what extent do marketing managers perceive the task of media selection as complex?

“Outdated planning processes and today's/tomorrow's technology realities require a new, more scientific way to plan that focuses on actual customer behavior and objectively considers all marketing resources to avoid missing customers at crucial points of influence” (Pickton, 2005, pp. 538-539). Developments in technology have not only led to changes in consumer media usage but also facilitate marketers to deliver more information about customers leading to more relevant marketing communication efforts. Examples of such technologies are marketing automation, data warehouses, web analytics, interactive media and CRM software (Pickton, 2005). Considering the increasingly complex task and the presumption that marketing managers, when selecting media, seem to be more and more challenged in their decisions, the third research question is:

RQ3: To what extent do marketing managers perceive it important to have updated knowledge about media and media selection?

2.3 Rationality and Non-rationality in Media Selection

In today's society where people cannot possibly process the entire existing overload of information, the ambition to make rational decisions (such as decisions in media selection) seems quite a challenge, i.e. taking into consideration and comparing all available alternatives and its' possible outcomes with each decision (Brunsson, 2000; Simon, 1997). This appears to be also the case for advertising media selection since the pre-study (Rademaker, 2011a) has pointed out that marketing managers seem to perceive media selection as becoming an increasingly complex task because of for example the fast rate of developments in new technology and thereby also increasingly new types of media that are becoming available.

Solving problems and making choices are most often presented as the main management tasks by both researchers and management consultants (Brunsson, 2000). According to Brunsson (ibid) the purpose of tools such as models produced by management researchers and consultants is to aid managers in making choices between alternatives and thereby in finding the right solutions in a more rational way. Further, when viewing that individuals are expected to rationalize their decisions (actions) and give explanations behind their decisions (Brunsson, 1993; Meyer, 1982), the use of models for media selection by marketing managers could indeed be seen as an attempt to make more rational decisions.

However, Brunsson (2000) argues that managers in practice dedicate little time on problem-solving, decision-making or making choices and that rational decision-making does not necessarily connote good management. "Successful management may have more to do with the ability to motivate people, to establish a good organizational climate, to create appropriate social

networks, or to develop powerful organizational ideologies.” (Brunsson, 2000, p. 3)

Furthermore, the Nobel laureate Herbert Simon (1997) underlines the fact that organizations comprise humans and that thereby rationality as such is difficult for a human to apply. Given this, an explanation of the non-use of models in practice could be found in Simon’s (ibid) widespread notion that limited resources such as time constraints, costs and the lack of information may hinder rational decision-making.

As opposed to rationality, Simon (ibid) instead proposes bounded rationality, i.e. that decision-making should be of a satisfying character rather than aiming to reach optimum decisions. Decisions are thereby adapted to the situation and the limited resources available. Looking upon this type of decision-making as a more realistic way as opposed to rational decision-making, Simon (ibid) brings forward the use of intuition (gut feeling) as one of the premises for decision-making and explains that a large part of the decision-making process is spent on intuition and even guessing. Given Simon’s notion on bounded rationality together with the findings of the pre-study (Rademaker, 2011a) indicating that marketing managers tend to make much use of their previous experience when selecting advertising media, it could be questioned to what extent marketing managers make use of previous experience, rules of thumb and gut feeling (non-model factors) for media selection. Thus, the fourth research question is:

RQ4: To what extent are non-model factors used by marketing managers for media selection?

2.3.1 Factors guiding Media Selection

When reviewing the literature, few empirical studies could be found that explored the factors guiding advertising media selection among marketing managers. For example, Gronhaug (1972) showed that one of the factors influencing advertising media selection is the degree of determination of the advertiser when grounding media selection on previous experience of

industry. This may lead to routine based decisions. Nowak et al (1993) found that audience reach and targeting are the main determinants of media selection among marketing managers in the United States. A study conducted among Swedish marketing managers, advertising and media agencies showed that the factors that influence media selection were product type, target group, a medium's communication characteristics, type of ad campaign, concentrated geographical focus, budget, season and availability of media space (Sandén-Håkansson, 1994). No prior studies were found that investigated the green environmental aspect in media selection.

An important factor for each organization to be able to react on changes in the market should be the confidence that change can be handled by and within the organization's existing roles, procedures and ideologies. When existing roles, procedures and ideologies fail to handle change, new set of rules are necessary before new action can be undertaken as the existing behavior of the organized individuals needs to be delimited. However, a consequence of limiting the variety of behavior in organizations is the risk for inertia, i.e. the variety of behaviors, perceptions and ideas is not expressed and thus not exploited to the benefit of the organization. Thereby, "A major internal source is being blocked" (Brunsson, 2000, p. 9).

It is found that rational decision-making may lead to inflexibility. Inflexibility in turn could make it more difficult for organizations to act and make proper adaptations to changes in the environment. Because of often failing to react to strong changes of societal value and consumer preferences, inflexible organizations may thus risk losing their legitimacy and resources that may eventually lead to bankruptcy (Brunsson, 2000).

Irrationality on the other hand may lead to organizations becoming more flexible as the behaviors of the organizational members are not limited by stringent rules and procedures. Irrationality in decision-making as well as in organizational ideologies is very common as it can be efficient in organizational life. Explanations for organization members to behave irrational are

for example the decision maker's lack of knowledge, the notion that irrationality is inbuilt in the human character and either incomplete or an overload of information (Brunsson, 2000). Since the literature discusses many forms of non-rationality such as bounded rationality (Simon, 1997) and irrationality (Brunsson, 2000), from this point onward in this paper, the non-use of models will be called non-rational decision making/non-rationality.

Given the above discussion on rationality and non-rationality, it could be questioned to what extent the use/non-use of models (rational/non-rational decision making) may lead to overlooking changes in consumer media habits such as the avoidance of advertising media because of green environmental concerns⁴. In addition, based on the findings from the pre-study (Rademaker, 2011a) that point out that green environmental aspects do not seem to be particularly considered by marketing managers despite consumers' increasing environmental concerns, and that no prior studies were found that investigated the green environmental aspect in media selection, the fifth research question is:

RQ5: To what extent are a medium's eco-friendly characteristics considered when marketing managers select advertising media?

2.4 Green Environmental Responsibility Attitude and Policies

As mentioned in the introduction, advertising media that is perceived to be harmful for the green environment may increase the tendency of consumers to avoid advertising in such media. Consumers may feel personal responsible for caring for the green environment by avoiding or even boycotting certain types of products that they perceive to be much harmful for the green environment. By doing so, consumers at the same time are indirectly demanding of companies to act more responsible towards the green environment for example by making use of more eco-

⁴ It is found that consumers are increasingly avoiding advertising media such as direct marketing in paper form because such media is perceived to be more harmful for the green environment than other media alternatives. See also the introduction.

friendly advertising media. It could thus be inferred that consumers' attitude toward green environmental responsibility may affect their perceptions and use of advertising media.

In a similar fashion, marketing managers' attitudes toward green environmental responsibility could be questioned. Thus, in order to help explain the findings of RQ5 - *To what extent are a medium's eco-friendly characteristics considered when marketing managers select advertising media?*- also marketing managers' attitudes toward green environmental responsibility ought to be measured.

When searching the literature on green environmental responsibility attitudes it was found that it is closely linked to theory on socially responsible consumption behavior. Socially responsible consumption is defined as “those consumer behaviors and purchase decisions which are related to environmental and resource-related problems and are motivated not only by a desire to satisfy personal needs, but also by a concern for the welfare of society in general (Antil, 1984, p. 35; Antil and Bennett, 1979, pp. 64-65).

By exploring perceptions of responsibility toward caring for the green environment among the users and non-users, attitudes toward green environmental responsibility of the marketing managers will be assessed. Thus, the sixth research question is:

RQ6: To what extent do the users and non-users differ on attitude towards green environmental responsibility?

As organizations comprise of individuals with their own interpretations and opinions leading to the potential to generate great varieties of behavior, the main goal of organization is to achieve joint action by reducing this variety in behavior and/or potential behavior of organization members.

Examples of ways for organizations to do so are to design rules to restrict behavior in a stringent way, to assign roles to provide a broader frame in which organization members can act

and/or to influence organization members to perceive, interpret and evaluate events. Hence, organizational action is created by coordinated individual actions (Brunsson, 2000).

A documented environmental policy could be seen as an example of an organization's aspiration to influence, guide and restrict behavior of organization members in relation to its ideology on caring for the green environment. Recalling the findings of the pre-study (Rademaker, 2011a) indicating that green environmental aspects seem not much taken into account when marketing managers select advertising media, despite companies' documented environmental policies, the seventh research question is:

RQ7: To what extent does a company's documented environmental policy affect the marketing manager's' attitude towards green environmental responsibility?

2.5 Selection of Advertising Media

According to Pickton (2005) current (traditional) approaches to marketing planning pay too little attention to the impact of technological advances on changes in consumer media habits. Consequently, media selection based on simply the repetition of old marketing plans and habits may not function most advantageous since it is not adjusted to the changing media habits of consumers. As a result, the main focus will be on conventional media and thereby the risk exists for ignoring and thereby not selecting "new" media (Pickton, *ibid*).

As mentioned previously, consumers' media habits may be influenced by not only technological developments but also by green environmental concerns. Of interest would be to explore whether the users and non-users differ in their typical selection of media for ad-campaigns with different communication objectives. The eighth research question is:

RQ8: To what extent do the users and non-users differ in their selection of advertising media?

2.7 Consistency and Control Problems with Ideas/Decisions and Action

According to Brunsson (1993) actions are guided and controlled by an individual's set of relatively stable preferences or ideas and his/her view of the situation at hand. Thereby consistency is attained between an individual's ideas and actions. These stipulations of individuals are an integral part of what is called rationality and can also be applied in describing groups of people i.e. organizations (Brunsson, 1993).

Achieving consistency and control between ideas and actions can be quite difficult for both individuals and groups. This is caused by discrepancies in, what can be said and what can be done, requirements for idea-producing and action-producing systems, and discrepancies in the rate at which ideas and actions are produced (constituency-actor model). Problems with consistency can be solved by justification while problems with control by hypocrisy, albeit to a certain extent (Brunsson, 1993).

Justification requires flexible ideas and actions as ideas are adjusted to action. When decision makers fail to control action, a discrepancy arises between decision and action, i.e. hypocrisy (Brunsson, 1993). According to March (1978) hypocrisy takes up a higher moral position as opposed to justification as “everyone is arguing for the right idea” (hypocrisy) instead of “some people defending bad actions” (justification)⁵.

Hypocrisy can solve inconsistency by “what can and should be said is said, not only by ordinary people but also by important people such as executives and actors, but without the talk leading to the corresponding action” (Brunsson, 1993, p. 502). Consequently, the executive's talk and decisions can be controlled by the ideas of the public whereby consistency between ideas, talk and decisions is reached. Especially for larger organizations, it is not uncommon that executives whose role is to talk and decide are remote from the actors whose actions are

⁵ Brunsson's (1993) description of March's (1978) explanation of hypocrisy versus justification.

evaluated. When executives are appreciated for what they say and actors' actions are evaluated a gap may appear between an organization's ideas and actions (Brunsson, *ibid*).

Executives tend to reinforce interpretations that talk and decisions are supposed to lead to action. It is therefore not uncommon for companies to formulate their talk and decisions as goals and visions for the future. This hypocrisy is a way for an organization to solve the discrepancy between ideas and goals. This way, today's actions of an organization are excused and instead its ideas are referring to the future. For example "The only chance of getting pollution accepted today may be to claim that the goal or plan is to reduce or stop in the future" (Brunsson, 1993, p. 502).

The pre-study (Rademaker, 2011a) indicated that despite documented environmental policies, considering green environmental aspects seem not much considered by marketing managers when they make decisions in media selection. The interviewed marketing managers of the pre-study seem to consider green environmental aspects as merely a trend that comes and goes and that this issue is dealt with elsewhere in the organization. To investigate whether consistency and control exists between companies with documented environmental policies (ideas/decisions) and their selection of advertising media (actions), the ninth research question is:

RQ9: Is there consistency between companies with environmental policies (ideas/decisions) and their selection of advertising media (action)?

2.5 Summary of the Research Questions

The research questions are summarized in the following:

The use and non-use of models for media selection

RQ1: To what extent do marketing managers use models for media selection?

Complexity and knowledge of media selection

RQ2: To what extent do marketing managers perceive the task of media selection as complex?

RQ3: To what extent do marketing managers perceive it important to have updated knowledge about media and media selection?

Rationality and non-rationality in media selection

RQ4: To what extent are non-model factors used by marketing managers for media selection?

RQ5: To what extent are a medium's eco-friendly characteristics considered when marketing managers select advertising media?

Green environmental responsibility attitude and policies (ideas/decisions)

RQ6: To what extent do the users and non-users differ on attitude towards green environmental responsibility?

RQ7: To what extent does a company's documented environmental policy affect the marketing manager's attitude towards green environmental responsibility?

Selection of advertising media (action)

RQ8: To what extent do the users and non-users differ in their selection of advertising media?

Consistency and control problems with ideas/decisions and action

RQ9: Is there consistency between companies with environmental policies (ideas/decisions) and their selection of advertising media (action)?

3. METHOD

3.1 Target Sample

The target sample comprises 499 members⁶ of the Association for Swedish Advertisers (ASA). A main reason behind opting for the sample is that Swedish largest media buyers can be found among these members. Consequently, their behavior has great consequences for the Swedish media industry. A broad diversity of companies with various types of annual media investments can also be found among the members of the ASA.

3.2 Data Collection

A web survey among the 499 members of the ASA was conducted using the software Qualtrics during October 4-18, 2010. One week prior to the launch of the survey an announcement was sent per email informing ASA's members of the upcoming survey. On the date of the survey launch, a link to the web survey was included in a message sent by email to all members of the ASA. Respondents were promised anonymity. Thereafter, reminder emails were sent to non-respondents.

The response rate was 39 percent (193 respondents). The partially completed surveys (88 respondents) were included in the study since the majority of the respondents were professionals with more than ten years of experience of media selection. Thus their input was considered valuable. The sample characteristics are presented in Table 1 below.

⁶ The members of ASA are most often marketing managers or managers with similar titles.

Table 1: Sample characteristics

Sample	Completed	Partially Completed
N=193 (100%)	105 (54.4%)	88 (45.6%)
Gender		
Female	54 (51%)	n. r.
Male	51 (49%)	n. r.
Age		
20 – 29 years	2 (1.9%)	n. r.
30 – 39 years	30 (28.6%)	n. r.
40 – 49 years	45 (42.9%)	n. r.
50 – 59 years	22 (21%)	n. r.
60 – 65 years	6 (5.7%)	n. r.
Business type		
100% B2C	15 (14.2%)	n. r.
10-30% B2C/70-90% B2B	29 (27.6%)	n. r.
40-60% B2C/40-60% B2B	19 (18.1%)	n. r.
70-90% B2C/10-30% B2B	16 (15.2%)	n. r.
100% B2B	26 (24.8%)	n. r.
Experience with media selection		
2 – 3 years	8 (7.6%)	n. r.
4 – 6 years	19 (18.1%)	n. r.
7 – 9 years	6 (5.7%)	n. r.
10 years and up	72 (68.6%)	n. r.
Annual media investments		
< 2 million SEK	23 (21.9%)	n. r.
< 5 million SEK	12 (11.4%)	n. r.
< 10 million SEK	19 (18.1%)	n. r.
< 15 million SEK	10 (9.5%)	n. r.
< 20 million SEK	8 (7.6%)	n. r.
< 40 million SEK	14 (13.3%)	n. r.
< 70 million SEK	7 (6.7%)	n. r.
> 70 million SEK	12 (11.4%)	n. r.
Employees		
< 10	7 (6.7%)	n. r.
11 – 50	15 (14.3%)	n. r.
51 – 500	35 (33.3%)	n. r.
501 – 1000	12 (11.4%)	n. r.
1001 – 5000	15 (14.3%)	n. r.
5001 – 10 000	5 (4.8%)	n. r.
> 10 000	16 (15.2%)	n. r.
Environmental Policy		
Yes	85 (79.4%)	n. r.
No	18 (16.8%)	n. r.
Do not know	4 (3.7%)	n. r.

4. ANALYSIS AND RESULTS

4.1 The Use and Non-use of Models for Media Selection

The first research question was:

RQ1: To what extent do marketing managers use models for media selection?

To measure the use of models for advertising media selection among the respondents, the following question was posed: “To what extent do you use models when selecting media for an ad campaign?” (Scale: 0 = never, 10 = always). This was followed by a second question: “If one or more marketing models are used when selecting media for an ad campaign, what are these models called?” with the two response options: 1 = “I never use models” and 2 = “I use the following models”, followed by a [TEXT] area.

Interestingly, 43 percent of the respondents who stated in the first question that they use models for media selection stated in the subsequent second question that they never use models. Upon observing this response behavior in the data, it was decided to disregard the first question. Thereby the focus was on analyzing the second question for measuring the use of models for media selection among the respondents. It was then found that 36 percent of the respondents use models when selecting media for ad campaigns while 64 percent stated to never use any model. Accordingly, these results thus indicate that the non-use of models for media selection exists among the majority of the marketing managers in the study.

Thus, while previous research found that many advertising agencies in practice avoid models altogether and that a substantial lack of knowledge of formal models exists, the present study shows that such is also the case among marketing managers when they select advertising media.

Of the respondents that claim to use models for media selection, 33 percent named the models they use. The remaining respondents did not mention any specific model but stated to make use of the company’s internal models (21 percent), statistics on reach/frequency generated by market

research agencies (14 percent), that they rely on models used by their cooperating agencies (14 percent), or that they could not recall the specific names of the models they use (12 percent). Another six percent reported to make use of predetermined types of media for their ad campaigns. From the perspective of the respondents these responses are considered as media selection models that they use. As such, all of the respondents that reported to make use of models for media selection, regardless of their subsequent response to model names, will be treated as users of media selection models in the present study. The results are presented in Table 2 below.

Table 2: Frequencies of types of models used by the users (n=51)

Responses to model names	Frequencies	Percentages
Named models	17	33%
Internal models	11	21%
Agency models	7	14%
Statistics	7	14%
Cannot recall name(s) of model(s)	6	12%
Predetermined media use	3	6%
Total	51	100%

4.2 Complexity and Knowledge of Media Selection

The second research question was:

RQ2: To what extent do marketing managers perceive the task of media selection as complex?

To measure to what extent marketing managers perceive media selection to be a complex task the following statement was used: “Media selection becomes more and more complicated” (Scale: 0 = totally disagree, 10 = totally agree). An independent samples t-test was conducted and it was found that the users ($M = 6.66$, $SD = 2.03$) and non-users ($M = 6.33$, $SD = 2.62$; $t = -.85$, $p = .394$) share similar beliefs namely that they agree to a rather great extent that media selection is

becoming increasingly complicated. No significant difference ($p \geq .05$) was found between the two groups (see Table 3).

The third research question was:

RQ3: To what extent do marketing managers perceive it important to have updated knowledge about media and media selection?

To measure the importance of knowledge on media and media selection to marketing managers, the following question was posed: “How important is it for you in your role as advertiser to have updated knowledge on media and media selection?” (Scale: 0 = totally disagree, 10 = totally agree).

The findings of an independent samples t-test revealed that both the users ($M = 9.78$, $SD = 1.10$) and non-users ($M = 9.52$, $SD = 1.50$; $t = -1.25$, $p = .215$) strongly agree on the importance of having updated knowledge on media and media selection. As a result, no significant differences were found between the users and non-users on this variable. Table 3 below presents the results of these findings.

Table 3: Knowledge and complexity in media selection among the users (n = 55-64) and non-users (n = 97-114)

Statement	Users M (SD)	Non- users M (SD)	t (df)	P	η^2
Media selection becomes increasingly complicated	6.66 (2.03)	6.33 (2.61)		n.s.	
Knowledge on media and media selection is important	9.78 (1.10)	9.52 (1.52)		n.s.	

4.3 Rationality and Non-rationality in Media Selection

The fourth research question was:

RQ4: To what extent are non-model factors used by marketing managers for media selection?

To assess the extent to which the respondents base media selection on other factors than models such as previous experience, rules of thumb and gut feeling, the following questions were posed: “From my experience I know which advertising media work and which do not” (Scale: 0 = totally disagree, 10 = totally agree), “I use my gut feeling when selecting advertising media for an ad campaign” (Scale: 0 = totally disagree, 10 = totally agree), and “To what extent do you use rules of thumb when selecting advertising media for an ad campaign?” (Scale: 0 = never, 10 = always).

Figure 1 below shows that the respondents are to a great extent using previous experience when selecting advertising media. This supports the findings of the pre-study (Rademaker, 2011a) on factors guiding media selection. It was also found that to some extent the respondents seem to use rules of thumb and gut feeling when selecting advertising media.

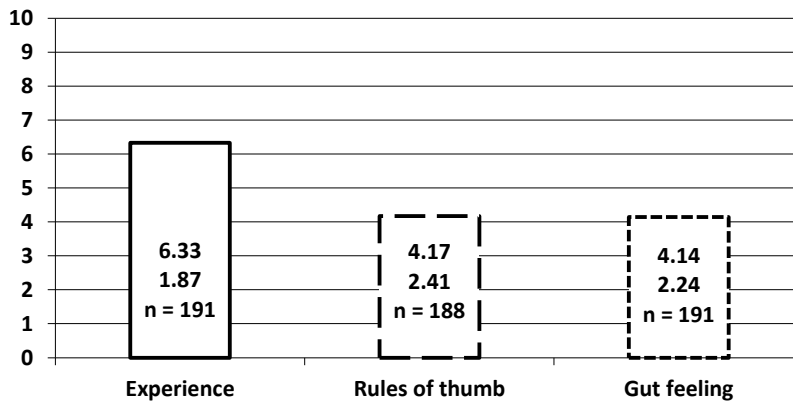


Figure 1: Means and standard deviations of the use of non-model factors for media selection

An independent-samples t-test was conducted to compare the use of experience, rules of thumb and gut feeling among the users and non-users. Significant differences ($p \leq .05$) were found on the use of experience among the users ($M = 6.80$, $SD = 1.62$) and non-users ($M = 6.13$, $SD = 1.95$; $t = -2.32$, $p = .022$, small $\eta^2 = .03$). It can thus be inferred that the users tend to make to some extent more use of previous experience than the non-users.

The results also showed a difference on the use of rules of thumb between the users ($M = 4.56$, $SD = 2.48$) and the non-users ($M = 3.83$, $SD = 2.40$; $t = 1.92$, $p = .056$, small $\eta^2 = .02$) but at a slightly less significant level ($p < .10$). This indicates that the users to some extent make more use of rules of thumb than the non-users.

No significant difference was found for the use of gut feeling between the users ($M = 3.73$, $SD = 2.18$) and the non-users ($M = 4.25$, $SD = 2.22$; $t = 1.51$, $p = .133$). Table 4 below presents an overview of these findings.

Table 4: The use of non-model factors for media selection among the users (n = 64) and non-users (n = 114)

Characteristics	Users M (SD)	Non- users M (SD)	t (df)	p	η^2
Experience	6.80** (1.62)	6.13 (1.95)	-2.32 (176)	.022	.03
Gut feeling	3.73 (2.18)	4.25 (2.22)		n.s.	
Rules of thumb	4.56* (2.48)	3.83 (2.40)	-1.92 (176)	.056	.02

Note: **: $p \leq 0.05$; *: $p \leq 0.10$

The fifth research question was:

RQ5: To what extent are a medium's eco-friendly characteristics considered when marketing managers select advertising media?

In order to measure to what extent a medium's eco-friendly characteristics are taken into consideration by the users and non-users when selecting advertising media, factors guiding media selection in order of importance were to be measured. This was based on the question "When you are selecting media for an ad campaign, what is mostly guiding your choice? Please rank the following factors where 1 = guides the most and 10 = guides the least"⁷.

The factors to be ranked are communication objective, target group, reach/frequency/impact, budget/costs, the medium's communicating characteristics, consumers' media attitudes, the medium's measurability, product type, availability of media space and the medium's eco-friendly characteristics. These factors were based on Sandén-Håkansson (1994) with the exception of the environmental characteristics of the medium, which was added for the purpose of the present study.

The results indicate that a medium's eco-friendly characteristics are ranked among the two last factors that guide media selection by both users and non-users. It can thus be inferred that this issue seem not much considered when the marketing managers select advertising media. Table 5 below gives a presentation of the findings.

An independent samples t-test was conducted and showed significant differences ($p \leq .05$) between the users and non-users on some of the factors guiding their choice of media (Table 6).

When selecting advertising media, the product type seem to be a rather more important factor for the non-users ($M = 5.28$, $SD = 2.36$) than for the users ($M = 4.34$, $SD = 2.46$; $t = 2.41$, $p =$

⁷ For the purpose of providing a more clear and consistent illustration of the results, when conducting the t-test the original values were reversed in SPSS so that 1 = guides the least and 10 = guides the most.

.017, small $\eta^2 = .04$).

At the same time as taking into consideration consumers' media attitudes seem to be a more important factor for the users ($M = 5.03$, $SD = 2.04$) than for the non-users ($M = 4.24$, $SD = 2.20$; $p = .024$, small $\eta^2 = .03$), the medium's eco-friendly characteristics seem to be more considered by the non-users ($M = 2.47$, $SD = 1.71$) than the users ($M = 1.88$, $SD = 1.22$; $t = 2.32$, $p = .012$, small $\eta^2 = .03$).

Some weaker differences were found at a significance level of $p \leq .10$ (Table 6). It was found that the medium's measurability is somewhat more important for the non-users ($M = 5.60$, $SD = 2.25$) than for the users ($M = 4.93$, $SD = 2.16$; $p = .066$, small $\eta^2 = .02$). Also, the communication objective of the ad campaign is found to be somewhat more important for the users ($M = 8.85$, $SD = 1.49$) than for the non-users ($M = 8.35$, $SD = 1.72$; $p = .065$, small $\eta^2 = .02$).

Table 5: Factors guiding media selection in rank order* among the users (n = 59) and non-users (n = 105)

Users	Non-users
1. Communication objective of the ad campaign	1. Target group
2. Target group	2. Communication objective of the ad campaign
3. Reach, frequency, impact	3. Reach, frequency, impact
4. Budget, media and production costs, time	4. Budget, media and production costs, time
5. The medium's communicating characteristics	5. The medium's measurability
6. Consumers' media attitudes	6. The medium's communicating characteristics
7. The medium's measurability	7. Product type
8. Product type	8. Consumers' media attitudes
9. Availability of media space	9. The medium's eco-friendly characteristics
10. The medium's eco-friendly characteristics	10. Availability of media space

*) 1 = guides the most, 10 = guides the least

Table 6: Factors guiding media selection among the users (n = 59) and non-users (n = 105)

Factors guiding media selection	Users M (SD)	Non users M (SD)	t (df)	p	η^2
Communication objective of the ad campaign	8.85* (1.49)	8.35 (1.72)	-1.86 (162)	.065	.02
Target group	8.64 (1.36)	8.59 (1.78)		n.s.	
Reach, frequency, impact	7.31 (1.55)	7.25 (1.98)		n.s.	
Budget, media and production costs, time etc.	5.80 (2.16)	5.72 (2.42)		n.s.	
The medium's communicating characteristics	5.73 (2.27)	5.32 (2.05)		n.s.	
Consumers' attitudes toward the different advertising media	5.03** (2.04)	4.24 (2.20)	-2.28 (162)	.024	.03
The medium's measurability	4.93* (2.16)	5.60 (2.25)	1.85 (162)	.066	
Product type	4.34** (2.46)	5.28 (2.36)	2.41 (162)	.017	.04
Availability of media space	2.49 (1.38)	2.18 (1.31)		n.s.	
The medium's eco-friendly characteristics	1.88** (1.22)	2.47 (1.71)	2.32 (162)	.012	.03

Note: **: $p \leq 0.05$; *: $p \leq 0.10$

4.4 Green Environmental Responsibility Attitude and Policies

The sixth research question was:

RQ6: To what extent do the users and non-users differ on attitude towards green environmental responsibility?

The following 10 items were used to measure green environmental responsibility attitude (inspired by Antil and Bennett, 1979 and Antil, 1984): “I am very concerned about the environmental situation of today”, “I do everything I can in my everyday life in order not to

contribute to harm the environment”, “In order to preserve the environment I print out paper as little as possible”, “I will stop buying products from companies that are guilty of harming the environment even if it would create discomfort for me”, “I am very precise with paper being sorted and recycled”, “I don’t think that there are any serious environmental problems today”, “Companies have a big responsibility not to harm the environment”, “Companies should do everything they can not to harm the environment”, “To care for the environment is the responsibility of the government and the parliament” and “The parliament should impose stricter laws for harming the environment” (Scale: 0 = completely disagree, 10 = completely agree).

In the attempt to compose an index, these 10 items were first subjected to principal component analysis (PCA) to check whether one or more factors were to be formed. Prior to performing the PCA, suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiser-Meyer-Olkin value was .85, exceeding the recommended value of .6 (Kaiser, 1970, 1974) and Bartlett’s Test of Sphericity (Bartlett, 1954) reached statistical significance, supporting the factorability of the correlation matrix. Principal component analysis revealed the presence of two components. However, the results of the PCA showed the items loadings on the two components with eight loadings on Component 1 and only two loadings on Component 2. It was then decided to retain only one factor and thereby the composition of one index.

To improve the Cronbach alpha coefficient, reliability analysis among the ten items suggested one item to be deleted, i.e. *“I don’t think that there are any serious environmental problems today”*. Green environmental responsibility attitude was then measured with the nine remaining items. Responses were averaged to form the index named GERA (Green Environmental Responsibility Attitude). The Cronbach alpha coefficient of GERA was .80.

To measure GERA among the users and non-users an independent samples t-test was conducted. No significant difference was found between the users ($M = 7.08$, $SD = 1.28$) and the non-users ($M = 7.17$, $SD = 1.39$; $t = .305$, $p = .761$) on GERA. When observing the rather high mean scores of the users and non-users, it could be inferred that both groups seem to have a strong attitude towards green environmental responsibility.

Further analysis was conducted by way of an independent t-test on each of the ten items among the users and non-users. Significant difference ($p \leq .05$) was then found on the variable “To care for the environment is the responsibility of the government and the parliament”. This variable seems to be rather more important for the non-users ($M = 4.63$, $SD = 2.42$) than for the users ($M = 3.56$, $SD = 2.90$; $t = 2.02$, $p = .046$, small $\eta^2 = .03$). Table 7 below presents these findings.

The relationship between green environmental responsibility attitude (GERA) and the factors guiding media selection was assessed next. Correlation analysis⁸ between GERA and the factors guiding media selection showed weak correlations⁹ among the non-users ($r = -.246$ to $.148$, $n = 67$, $p > .05$ except for availability of media space: $p = .045$). These findings indicate that the non-users’ attitudes toward green environmental responsibility are weakly related to the factors that guide marketing managers when selecting advertising media. There were also weak correlations found among the users ($r = -.146$ to $.297$, $n = 39$, $p > .05$) except for the medium’s communication characteristics ($r = -.309$, $p = .055$) and availability of media space ($r = -.460$, $p = .003$) where a moderate correlation was found. The users’ GERA are thus weakly related to factors guiding media selection with the exception of the medium’s communication characteristics and availability of media space that are moderately related.

⁸ Pearson correlation analyses were performed as well as preliminary analyses to ensure no violation of the assumptions of normality, linearity and homoscedasticity.

⁹ The size of the values of the correlation coefficients are interpreted as suggested by Cohen (1988, pp. 79-81).

Table 7: Green environmental responsibility attitude (GERA) among the users (n = 39-40) and non-users (n = 67)

Item	Users M (SD)	Non- users M (SD)	t (df)	P	η^2	Index	Cronbach Alpha	t (df)	P
I am very concerned about the environmental situation of today	7.13 (2.25)	7.03 (2.35)		n.s.		GERA	.80		n.s.
I do everything I can in my everyday life in order not to contribute to harming the environment	6.10 (1.90)	6.78 (2.20)		n.s.					
In order to save the environment I print out paper as little as possible	6.79 (2.03)	6.64 (2.84)		n.s.					
I will stop buying products from companies that are guilty of harming the environment even if it would create discomfort for me	7.13 (2.14)	6.76 (2.42)		n.s.					
I am very precise with paper being sorted and recycled	8.82 (1.37)	8.69 (2.10)		n.s.					
I think that companies have a big responsibility to not harm the environment	8.62 (1.50)	8.40 (1.92)		n.s.					
Companies should do everything they can to not harm the environment	8.08 (1.63)	8.51 (1.84)		n.s.					
To care for the environment is the responsibility of the government and the parliament	3.56 (2.90)	4.63** (2.42)	2.02 (104)	.046	.03				
The parliament should impose stricter laws for harming the environment	7.51 (2.01)	7.06 (2.19)		n.s.					
I don't think there are any serious environmental problems today	0.59 (0.85)	1.16 (2.35)		n.s.		Item deleted			
GERA Index	7.08 (1.28)	7.17 (1.39)		n.s.					

Note: **: $p \leq 0.05$

The seventh research question was:

RQ7: To what extent does a documented environmental policy affect the marketing manager's attitude towards green environmental responsibility?

To measure the extent to which the respondents work for companies with and without environmental policies respectively, the following question was posed “Does the company you work for have a documented environmental policy?” (Scale: 0 = yes, 1 = no).

The results show that 79.4 percent of the respondents state to work at companies with a documented environmental policy. A large majority of the respondents thus seem to work at companies with such policies.

Table 8 below shows that no significant difference was found on the GERA between the respondents working at companies with documented environmental policies ($M = 7.28$, $SD = 1.18$) and those working at companies without such policies ($M = 6.62$, $SD = 1.95$; $t = p = .178$). Further analysis between the respondents working at companies with and without documented environmental policies on each of the ten items measuring green environmental responsibility attitude showed some differences (Table 8). At a significance level at $p \leq 0.10$ and taking into account the small sample size of those working at companies without a documented environmental policy ($n = 18$), the results indicate that those working for companies with documented environmental policies ($M = 9.03$, $SD = 1.43$) tend to be somewhat more precise with paper being sorted and recycled than those working for companies without such policy ($M = 7.56$, $SD = 2.99$; $t = 2.05$, $p = .055$, small $\eta^2 = .03$).

Table 8: Green environmental responsibility attitudes among companies with (n = 84-85) and without (n =18) environmental policies

Item	Index	Cronbach Alpha	Policy M (SD)	No Policy M (SD)	t (df)	P	η^2
I am very concerned about the environmental situation of today	GERA	.80	7.20 (2.26)	6.83 (2.53)		n.s.	
I do everything I can in my everyday life in order not to contribute to harming the environment			6.64 (2.02)	6.11 (2.63)		n.s.	
In order to save the environment I print out paper as little as possible			6.86 (2.52)	6.11 (2.85)		n.s.	
I will stop buying products from companies that are guilty of harming the environment even if it would create discomfort for me			7.10 (2.23)	6.39 (2.68)		n.s.	
I am very precise with paper being sorted and recycled			9.03 (1.43)	7.56* (2.99)	2.05 (19)	.055	.03
I think that companies have a big responsibility to not harm the environment			8.67 (1.50)	7.83 (2.62)		n.s.	
Companies should do everything they can to not harm the environment			8.51 (1.59)	7.89 (2.37)		n.s.	
To care for the environment is the responsibility of the government and the parliament			4.19 (2.61)	4.00 (2.82)		n.s.	
The parliament should impose stricter laws for harming the environment	Item deleted		7.34 (1.93)	6.83 (2.90)		n.s.	
I don't think there are any serious environmental problems today			.87 (1.79)	1.28 (2.72)		n.s.	
GERA Index			7.28 (1.18)	6.62 (1.95)		n.s.	

Note: *: $p \leq 0.10$

4.5 Selection of Advertising Media

The eighth research question was:

RQ8: To what extent do the users and non-users differ in their selection of advertising media?

To measure which media marketing managers usually select for ad campaigns with different communication objectives, the following questions were posed: “To what extent, do you usually

select the following advertising media when the communication objective for an ad campaign is mostly *brand building*?” and “To what extent, do you usually select the following advertising media when the communication objective for an ad campaign is mostly *to increase sales*?” (Scale: 0 = not at all, 10 = to a great extent).

Prior to comparing media selection between the users and the non-users, a paired-samples t-test was conducted to obtain an overall impression on which media is typically selected for ad-campaigns by the marketing managers. In Table 9 and Figure 2 below the results of the findings are presented.

Among all the 11 media studied here, media using the Internet and magazines and newspapers are media that seem to be selected most by marketing managers for both communication objectives. The least popular advertising medium for primarily a brand-building objective seem to be the mobile phone ($M = 1.70$, $SD = 1.84$) while cinemas ($M = 1.62$, $SD = 2.41$) seem to be the least selected when the objective is to increase sales.

Significant differences in the selection of media between the two different communication objectives were found. When the objective is primarily *brand-building* (brand), the following media seem to be selected to a greater extent than when it is primarily to increase sales (sales):

- Magazines and newspaper (brand: $M = 7.17$, $SD = 2.56$ vs. sales: $M = 6.53$, $SD = 2.80$; $t = 2.49$, $p = .014$, small $\eta^2 = .05$)
- Outdoor media (brand: $M = 5.14$, $SD = 3.35$ vs. sales: $M = 3.86$, $SD = 3.37$; $t = 5.03$, $p < .001$, large $\eta^2 = 0.16$)
- TV (brand: $M = 5.36$, $SD = 4.24$ vs. sales: $M = 4.06$, $SD = 3.84$; $t = 5.56$, $p < .001$, large $\eta^2 = .19$)
- City buses (brand: $M = 3.38$, $SD = 3.31$ vs. sales: $M = 2.27$, $SD = 2.84$; $t = 4.85$, $p < .001$, large $\eta^2 = .16$)

- Cinema (brand: $M = 3.10$, $SD = 3.44$ vs. sales: $M = 1.62$, $SD = 2.41$; $t = 6.34$, $p < .001$, large $\eta^2 = .23$)

When the objective is primarily to *increase sales* (sales) the following media seem to be selected to a greater extent than when it is primarily brand-building (brand):

- Mobile phones (sales: $M = 3.53$, $SD = 3.49$ vs. brand: $M = 1.70$, $SD = 1.84$; $t = -6.51$, $p < .001$, large $\eta^2 = .25$)

- Catalogues and brochures (sales: $M = 5.50$, $SD = 3.42$ vs. brand: $M = 4.71$, $SD = 3.16$; $t = -2.89$, $p = .005$, moderate $\eta^2 = .06$)

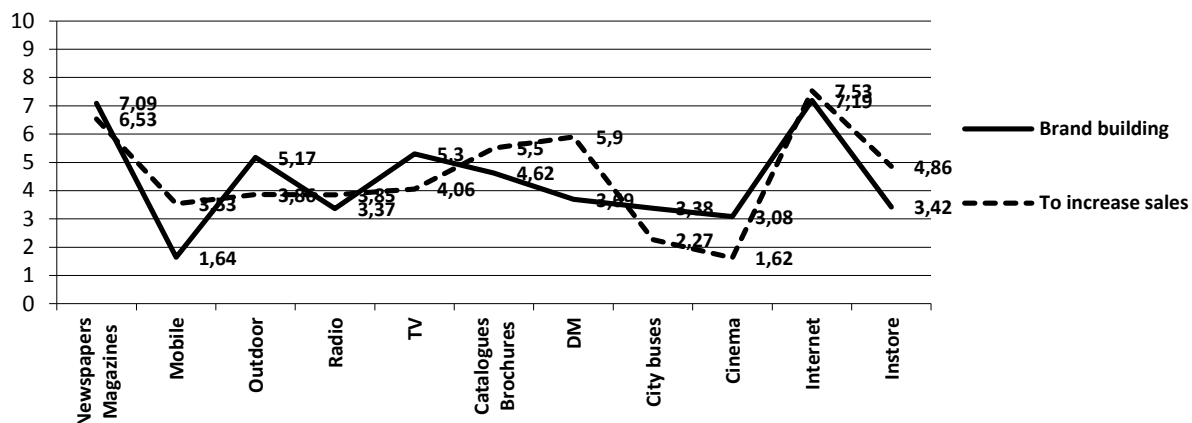
- Direct marketing (sales: $M = 5.90$, $SD = 3.84$ vs. brand: $M = 3.68$, $SD = 3.19$; $t = -7.17$, $p < .001$, large $\eta^2 = .28$)

- In-store (sales: $M = 4.86$, $SD = 4.26$ vs. brand: $M = 3.55$, $SD = 3.55$; $t = -4.86$, $p < .001$, large $\eta^2 = .15$)

No significant differences between the two objectives were found regarding the selection of radio and media using the Internet. It could thus be inferred that these two types of media tend to be selected to the same extent for both communication objectives.

Table 9: Selection of advertising media for different objectives (n=133)

Medium	Brand building M (SD)	Increase sales M (SD)	t (df)	p	η^2
Magazines & newspapers	7.17** (2.56)	6.53 (2.80)	2.49 (132)	.014	.05
Mobile phones	1.70*** (1.84)	3.53 (3.49)	-6.51 (132)	< .001	.25
Outdoor	5.14*** (3.35)	3.86 (3.37)	5.03 (132)	< .001	.16
Radio	3.43 (3.29)	3.85 (3.64)		n.s.	
TV	5.36*** (4.24)	4.06 (3.84)	5.56 (132)	< .001	.19
Catalogues & brochures	4.71*** (3.16)	5.50 (3.42)	-2.89 (132)	.005	.06
Direct Marketing	3.68*** (3.19)	5.90 (3.84)	-7.17 (132)	< .001	.28
City buses	3.38*** (3.31)	2.27 (2.84)	4.85 (132)	< .001	.16
Cinema	3.10*** (3.44)	1.62 (2.41)	6.34 (132)	< .001	.23
Internet	7.26 (2.28)	7.53 (2.42)		n.s.	
In-store	3.55*** (3.55)	4.86 (4.26)	-4.86 (132)	< .001	.15

Note: ***: $p \leq 0.01$; **: $p \leq 0.05$ **Figure 2: Means of media selection for different objectives**

4.5.1 Media selection among the users and non-users

An independent samples t-test was conducted to compare media selection among the users and non-users. Significant differences were found among the two groups. Table 10 and Figure 3 below show the results of media selection for the two different objectives among the users and non-users. The results indicate that when the objective is primarily *brand building*, the following media is more selected by the users than the non-users:

- Radio (users: $M = 4.34$, $SD = 3.20$ vs. non-users: $M = 2.82$, $SD = 3.22$; $t = -2.75$, $p = .007$, moderate $\eta^2 = .06$).
- TV (users: $M = 7.15$, $SD = 3.58$ vs. non-users $M = 4.24$, $SD = 4.24$; $t = -4.41$, $p < .001$, large $\eta^2 = .13$).
- Cinema (users: $M = 4.13$, $SD = 3.67$ vs. non-users: $M = 2.47$, $SD = 3.21$; $t = -2.85$, $p = .005$, moderate $\eta^2 = .06$).

When the objective is primarily *brand building* the results also indicate that, catalogues and brochures tend to be more selected by the non-users ($M = 5.01$, $SD = 2.97$) than the users ($M = 3.94$, $SD = 3.35$; $p = .049$, small $\eta^2 = .03$).

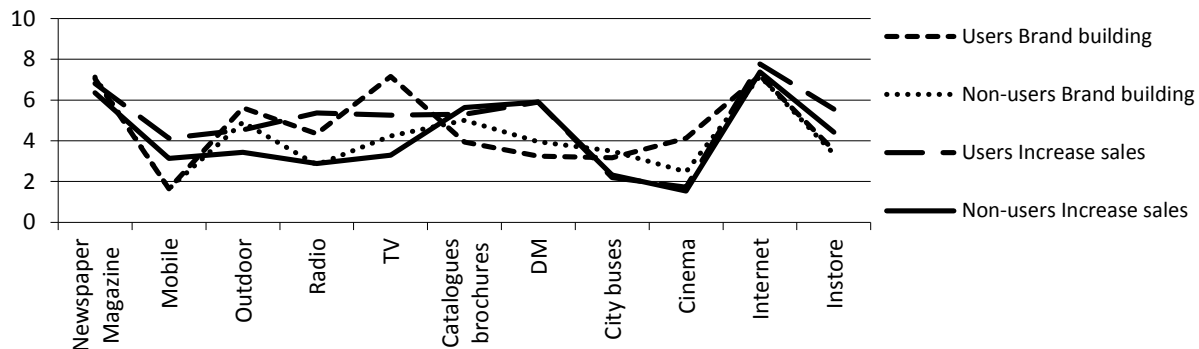
In addition, when the objective is primarily to *increase sales*, the following media is more selected by the users than the non-users:

- Radio (users: $M = 5.37$, $SD = 3.48$ vs. non-users: $M = 2.88$, $SD = 3.43$; $t = -4.06$, $p < .001$, moderate $\eta^2 = .11$).
- TV (users: $M = 5.25$, $SD = 3.51$ vs. non-users: $M = 3.30$, $SD = 3.86$; $t = -2.95$, $p = .004$, moderate $\eta^2 = .06$).

From these results, it could be inferred that the users seem to select to a greater extent than the non-users electronic media such as TV, radio and cinema while the non-users tend to select more paper-based media such as catalogues and brochures.

Table 10: Media selection among the users (n=52-53) and non-users (n=81-92)

Medium	Brand building					Increase sales				
	Users M (SD)	Non- users M (SD)	t (df)	P	η^2	Users M (SD)	Non- users M (SD)	t (df)	P	η^2
Magazines & newspapers	7.04 (2.74)	7.12 (2.62)		n.s.		6.81 (2.77)	6.35 (2.82)		n.s.	
Mobile phones	1.64 (1.72)	1.64 (1.87)		n.s.		4.13 (3.51)	3.14 (3.44)		n.s.	
Outdoor	5.62 (3.21)	4.91 (3.46)		n.s.		4.54 (3.48)	3.43 (3.24)		n.s.	
Radio	4.34*** (3.20)	2.82 (3.22)	-2.75 (143)	.007	.06	5.37*** (3.48)	2.88 (3.43)	-4.06 (131)	<.001	.11
TV	7.15*** (3.58)	4.24 (4.24)	-4.41 (124)	<.001	.13	5.25*** (3.51)	3.30 (3.86)	-2.95 (131)	.004	.06
Catalogues & brochures	3.94** (3.35)	5.01 (2.97)	1.99 (143)	.049	.03	5.31 (3.56)	5.63 (3.35)		n.s.	
Direct Marketing	3.25 (2.96)	3.95 (3.29)		n.s.		5.90 (3.92)	5.90 (3.81)		n.s.	
City buses	3.17 (3.14)	3.50 (3.46)		n.s.		2.19 (2.64)	2.32 (2.98)		n.s.	
Cinema	4.13*** (3.67)	2.47 (3.21)	-2.85 (143)	.005	.06	1.73 (2.43)	1.54 (2.40)		n.s.	
Internet	7.21 (2.27)	7.18 (2.39)		n.s.		7.77 (2.09)	7.38 (2.61)		n.s.	
In-store	3.53 (3.35)	3.36 (3.60)		n.s.		5.56 (4.37)	4.42 (4.16)		n.s.	

Note: ***: $p \leq 0.01$; **: $p \leq 0.05$ **Figure 3: Media selection among the users (n=52-53) and non-users (n=81-92)**

4.6 Consistency and Control Problems with Ideas/Decisions and Action

The ninth and last research question was:

RQ9: Is there consistency between companies with environmental policies (ideas/decisions) and their selection of advertising media (action)?

Taken together, the findings have shown that while the majority (82 percent) of the respondents works for companies with documented environmental policies (ideas/decisions) green environmental aspects are among the factors that are the least considered when they select advertising media (action). These findings thus indicate that there are problems with consistency between companies' documented environmental policies (ideas/decisions) and their selection of advertising media (action). The results thereby support the findings from the pre-study (Rademaker, 2011a), that indicated that such inconsistency at companies may exist.

Another inconsistency seem to exist namely that the non-users tend to select paper based media such as catalogues and brochures to a greater extent than the users while the users tend to select more electronic media such as radio, TV and cinema. Recalling that the non-users are found to take a medium's ecological characteristics more into consideration than the users and that paper-based media seem to be perceived by consumers as rather harmful for the environment¹⁰ inconsistency between the non-users' ideas and action also seem to exist on this matter.

¹⁰ As discussed in the introduction

5. CONCLUSIONS

The use and non-use of models for media selection

This study showed that 64 percent of the marketing managers in the study do not make use of media selection models while 36 percent claim they do. These findings thus add to prior research on the non-use of models in practice by showing that the non-use of models also exists among marketing managers when selecting advertising media for marketing communication purposes.

The results of this study points out a link between media selection based on models, previous experience and rules of thumb, i.e. marketing managers who use models (users) also tend to make more use of previous experience and rules of thumb compared to those who never use any model for media selection (non-users). In addition, the findings indicated that the users and non-users make equally much use of their gut feeling (intuition) when they select media for ad-campaigns.

Complexity and knowledge of media selection

Besides the economic importance of decisions in media selection whereby advertising investments are at stake, rapid technological developments in for example the digital media environment has lead to increasing ways in which companies can communicate with consumers.

The findings show that the users and non-users alike perceive the task of selecting advertising media a high complex task in today's increasingly changing media landscape. In addition, both the users and non-users believe it to be much important to have updated knowledge on media and media selection.

Rationality and Non-rationality in media selection

As mentioned in the theoretical framework, the purpose of tools such as models is to help managers in making choices between alternatives in a more rational way (Brunsson, 2000). Moreover, when assuming that individuals are expected to rationalize their decisions (actions)

and give explanations behind their decisions (Brunsson, 1993; Meyer, 1982), the use of models for media selection by marketing managers could indeed be seen as an attempt to make more rational decisions. Thus, when viewing the use of models as an attempt to make more rational decisions, the non-use of models for media selection could be considered to coincide with Brunsson's (2000) notion on irrationality¹¹ and Simon's (1997) widespread notion on bounded rationality¹². Following this, differences were found between the factors that guide media selection for marketing managers who claim to use models (users/rationality) and those who claim never to use any model (non-users/non-rationality) for media selection.

It was found that the users take a medium's eco-friendly characteristics less into consideration than the non-users. This indicates that marketing managers using models for media selection tend not to take into account changes in consumer media usage in relation to consumer attitudes toward the green environment. An explanation for this could be the way in which the users apply existing models for media selection. Recalling the link found in the present study between the use of models, previous experience and rules of thumb, it could be inferred that the current use of models may be too much influenced by previous experience and rules of thumb. Consequently, this may lead to routine based decisions whereby changes in the behavior/attitude of the consumer, such as the importance of an advertising medium's eco-friendly characteristics, are not taken into consideration.

The non-users, who do not seem to make as much use of previous experience and rules of thumb as the users may be somewhat more open to impressions of consumers' changing preferences. Hence, when using a model the marketing manager should not allow his/her

¹¹ According to Brunsson (2000) managers in practice dedicate little time on tasks such as decision-making, problem-solving and making choices. During the time spend on these tasks, managers show irrationality. See also the introduction.

¹² Simon (1997) argues that satisfying decisions should be the preferred option instead of rational decisions because of limited resources such as time, costs and lack of information. See also the introduction.

previous experience influence the media selection to the extent that when mapping the preferences of consumers, some crucial changes in consumers' behavior, such as consumers' increasing concern for the green environment, are ignored.

It could also be argued that the use of models is a way to make conscious choices, and thus more rational decisions, as they can be better explained while decisions made in a more non-rational manner are more difficult to explain. When referring to Brunsson (1993) on the advantages of irrationality in terms of the ability for organizations to be more flexible in decision-making and thus to be able to make adaptations to changing consumer demands, the findings here make sense. Based on the results it could be implied that the users tend to restrict their decision-making by basing it on what is already known¹³ i.e. rules of thumb and past experience which may lead to the inflexibility to adapt to change.

In contrast, the non-users seem to be more flexible, as there seem to be no such restriction. Consequently, the lack of such restrictions facilitates the non-users to be more open and susceptible to change. This is in line with Brunsson's (ibid) explanation on irrationality whereby he states that decisions made based on irrationality (non-users) are more quickly to adapt to change than when rationality (users) is applied in decision-making.

Thus, the use of models, previous experience and rules of thumb (users/rationality) may lead to inflexibility which in turn may hinder adaptations to changes. As a consequence, current (use of) media selection models and approaches do not seem to give way for adaptations to, for example, consumers' increasing concern for the green environment. A new approach to model use may be needed whereby the media selection should not be too much influenced by the marketing managers' previous experience and rules of thumb. Otherwise, new factors may be

¹³ Marketing managers' existing knowledge within the framework of models, rules of thumb and previous experience when selecting advertising media. Knowledge outside this framework may not be actively sought after.

overlooked such as consumers' increasing concern for the green environment in relation to consumer media usage.

Factors of importance for media selection

It was found that the non-users take a medium's eco-friendly characteristics more into account than the users. However, taking into account a medium's eco-friendly characteristics is still ranked among the two last factors considered by all the marketing managers studied. Thus, it could be argued that existing models and/or approaches for media selection are in need of adaptations in the sense that consumers' attitudes toward green environmental responsibility ought to be taken into consideration to a greater extent.

Further analysis on factors of importance for media selection showed that the non-users consider also product type and a medium's measurability to be more important factors than the users. It may be that the non-users use the medium's measurability-factor to help explain their decisions in media selection. It was also found that the users seem to consider the communication objective to be a more important factor for guiding media selection than the non-users.

Interestingly, at the same time as the users consider consumers' media attitudes to be a more important factor than the non-users, they consider a medium's eco-friendly characteristics to be less important. Moreover, the latter is considered the least important factor for guiding media selection by the users. It could thus be inferred that the users tend to overlook the green environmental aspect in media selection to a greater degree than the non-users.

It could be speculated that marketing managers may be relying too much on the current type of information about consumers' media attitude from their network of cooperating agencies, for example market research agencies. When assessing consumers' media attitudes, the focus may be

too much on reach¹⁴ and frequency¹⁵ rather than on consumers' perceptions on advertising in different media. Making regular assessments of the latter will minimize the risk for overlooking changes in consumers' perceptions on advertising media such as consumers' increasing concern for the green environment in relation to advertising media.

Selection of advertising media

The advertising medium that seems to be selected most by the marketing managers is the Internet (media using the Internet) for the two communication objectives, i.e. for both brand-building and to increase sales. Differences in the selection of media were also found between the two objectives.

Media such as magazines and newspapers, outdoor, city buses, TV and cinemas tend to be selected to a greater extent when the objective is primarily brand-building than when it is primarily to increase sales. When the objective is primarily to increase sales, marketing managers tend to select media such as mobile phones, catalogues and brochures, direct marketing and in-store ads to a greater extent than when the objective is primarily brand-building. The least popular advertising medium selected by the marketing managers (both users and non-users) is found to be the cinema when the objective is primarily to increase sales, and the mobile phone for primarily a brand-building objective. Perhaps this is the case, as the mobile phone is perceived to be a rather young advertising medium still making its way into becoming consumers', and marketing managers', preferred advertising medium.

Previous studies, state that current approaches to marketing planning pay too little attention to the impact of technological advances on changes in consumer media habits. In addition, when

¹⁴ How many persons of the target audience are expected to be exposed to the advertiser's message during a given time period, is termed reach (Coulter and Sarkis, 2005).

¹⁵ How often each person of the target audience, on average, is expected to be exposed to the advertiser's message during a given time period, is termed frequency (Coulter and Sarkis, 2005).

advertising media selection is based on old habits the risk exists for focusing on mainly conventional media, and thereby ignoring and not selecting “new” media (Pickton, 2005). To some extent, the results of the present study seem to contradict these previous studies by indicating that the selection of “new media” such as media using the Internet was found to be among the most selected by both the users and non-users for the two communication objectives.

No differences were found between the users and non-users in the selection of “new media” such as media using the Internet and mobile phones. These findings may indicate that to some extent the marketing managers seem to adapt their media selection to changes in technological media developments. However, the marketing managers seem to overlook developments in consumers’ increasing green environmental concerns in relation to consumer media usage. As a consequence, a medium’s green environmental characteristics, is the least considered by the marketing managers in media selection.

Differences between the users and non-users were found in relation to the selection of conventional media such as TV, radio, cinema, catalogues and brochures. The users seem to select radio, TV¹⁶ and cinemas¹⁷ to a greater extent than the non-users. In addition, it was found that catalogues and brochures¹⁸ seem to be selected to a greater extent by the non-users than the users. Thus, it could be inferred that the users tend to select to a greater extent than the non-users electronic media such as TV, radio and cinema while the non-users tend to select more paper-based media such as catalogues and brochures.

Consistency and control problems between ideas/decisions and actions

In the attempt to explore further to what extent companies are acting on current trends in

¹⁶ Radio and TV are media that are selected to a greater extent by the users than the non-users for both communication objectives namely, to increase sales and brand-building.

¹⁷ Cinemas are selected to a greater extent by the users than the non-users when the communication objective is primarily brand-building

¹⁸ Catalogues and brochures are selected to a greater extent by the non-users than the users when the communication objective is primarily brand-building.

consumer behavior, i.e. consumers' increasing usage of eco-friendly advertising media, problems with both consistency and control were found between what seems to be said and what seems to be done by companies (ideas/decisions versus actions).

While 82 percent of the marketing managers in the study work for companies that have documented environmental policies, green environmental aspects are among the factors that are considered least when they select advertising media. Documented environmental policies can be looked upon as a company's ideas and/or decisions with respect to taking part in caring for the green environment. The findings indicate that there seem to be problems with consistency between companies' ideas, decisions and actions in relation to their environmental policies (ideas/decisions) and marketing communication efforts (actions).

It could be argued that consistency and control between a company's ideas, decisions and action could be reached albeit to a certain extent by way of hypocrisy. For example, by formulating green visions and goals *for the future* in such policies, consistency is created whereby today's actions of companies are excused (Brunsson, 1993) by both organization members and consumers.

However, consumers are becoming increasingly committed and involved in caring for the green environment, which has already led to the increase in consumers' criticism and actions towards companies' impact on the environment. Furthermore, consumers are increasingly showing to take a stance on their views on companies' actions that could harm our planet including companies' choice of advertising media. This in turn has already shown to have consequences for consumer media usage¹⁹. When this trend in consumer behavior continues the

¹⁹ About 25 percent of Swedish households prefer not to receive paper-based advertising media such as direct marketing (YouGov, 2009). Thirty nine percent of Copenhagen's households have similar preferences which has even led to an environmental movement to urge other households to stop consuming paper-based advertising media as it is not regarded as environmentally friendly (Andersson, 2011). See also the introduction.

risk may exist that the choice of advertising media may eventually affect brand attitude. Marketing managers and thereby companies ignoring these changes in advertising media attitudes and advertising media usage may consequently pose a competitive disadvantage.

The results demonstrate that companies with documented environmental policies have a propensity to be more committed to making sure that paper is being recycled for environmental reasons. This indicates consistency and control between an organization's ideas/decisions, in this case environmental policies and its actions, i.e. recycling of paper. On the other hand, this consistency and control can be seen as to affect mostly an organization's internal behavior.

At the same time as the non-users are considering the green environmental aspect more than the users when selecting media, they tend to select more paper-based media such as catalogues and brochures as opposed to the users. From the perspective of consumers, this could indicate problems with consistency and/or control between companies' environmental policies (ideas/decisions) and their selection of eco un-friendly advertising media²⁰ (action²¹).

Thus, it could be inferred that consistency and control problems seem to exist in terms of companies' external behavior, i.e. the discrepancy between advertising media selection (action) and companies' environmental policies (ideas/decisions). Consistency and control of this discrepancy could however be achieved by way of justification, albeit to a certain extent. For example, after the detection of such discrepancy, companies can communicate to consumers about their choice of paper-based advertising media in terms of the company's perspective on the eco-friendly characteristics of such media.

Given the findings, it could be questioned why documented environmental policies do not seem to be used as directives for marketing communication purposes in general and advertising

²⁰ Consumers seem to have a negative perception of paper-based advertising media such as direct marketing being harmful for the environment as discussed in the background of this paper.

²¹ Claimed action, as self-reported by the respondents in the survey.

media selection in particular. It is somewhat contradicting to observe that the selection of an advertising medium, which is something very visible and communicative, does not seem to be guided by environmental concerns, despite a company's documented environmental policy.

An explanation for the acceptance of other organization members complying with marketing managers neglecting the green environmental aspect in advertising media selection could perhaps be found when referring to Brunsson's (1993) notion on inconsistency (to say what can be said) and control (to do what can be done). Perhaps recycling paper is considered to be within the scope of what can be done to care for the green environment from the perspective of organization members. It may be that recycling paper is already an established and accepted norm for preserving our planet while considering an advertising medium's eco-friendly characteristics is not.

Advertising media can take many different forms. One plausible explanation for marketing managers to somehow neglect the green environmental aspect in media selection may be their exposure to conflicting information found in for example mass media, on how harmful for the green environment a specific advertising medium is. Could this confusion of unclear information lead to marketing managers deciding to simply ignore the green environmental aspect in relation to media selection for marketing communication purposes? It could also be speculated that companies with documented environmental policies may perceive paper-based media not to be as harmful for the green environment because of the re-cycling of paper and thus they select many paper-based media such as catalogues and brochures. They may do so with the conviction that it is in line with their documented environmental policies and perspectives on media characteristics. Consequently, they do not see any problems with consistency and control between their ideas/decisions (documented environmental policies) and actions (paper-based media selection).

6. FUTURE RESEARCH

While this study has provided additional support for the notion that a medium's eco-friendly characteristics are the least considered by marketing managers when selecting advertising media, consumers' perceptions on the importance of such media characteristics should be further explored. With respect to future research, there is a need to identify consumers' perceptions on advertising media in relation to its' eco-friendly characteristics as it may impact advertising effectiveness, i.e. brand and ad attitude and purchase intention. In particular, consumers' perceptions on how harmful for the environment different advertising media are should be investigated.

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